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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,440	01/23/2002	Yoji Ito	030662-081	1948

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EXAMINER

HON, SOW FUN

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	Application No. 10/052,440	Applicant(s) ITO, YOJI	
	Examiner Sow-Fun Hon	Art Unit 1772	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 15 December 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☒ The proposed amendment(s) will not be entered because:
- (a) ☒ they raise new issues that would require further consideration and/or search (see NOTE below);
 - (b) ☐ they raise the issue of new matter (see Note below);
 - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See attachment to advisory action.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See attachment to advisory action.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☒ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: None.

Claim(s) objected to: None.

Claim(s) rejected: 5-15.

Claim(s) withdrawn from consideration: None.

8. ☐ The drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☒ Other: Attachment to advisory action

Advisory Action

1. The response dated 12/15/04 will not be entered. No new issues are raised by the amendment of claims 5, 7-8, 14-15, since said claims would still be rejected over Okazaki in view of Schumacher. Regarding the amendment of claims 9, 11-13, however, new issues are raised by the submission of the English translation of the priority document JP Application No. 2001-014833.

2. Applicant argues that the final Office action dated 09/15/04, was premature because claims 5 and 7 were amended merely to place said claims in independent form.

Applicant is respectfully apprised that claims 10-13 were dependent on claim 1 via claim 10 in the set of claims dated 01/23/02, which were then amended to depend on claim 9 in the set of claims dated 06/21/04. Said amendment necessitated new grounds of rejection. Therefore finality of the Office action was indeed necessitated by the amendment dated 06/21/04.

3. Applicant's arguments against the applied prior art rejections are addressed below.

4. Applicant argues that Okazaki relates to an element which can be utilized for the preparation of optical elements such as an optical compensatory sheet and a liquid crystal cell, and does not disclose or suggest an optically anisotropic layer formed from liquid crystal molecules and monomers having four or more double bonds, said discotic liquid crystal molecules and the monomers being co-polymerized in the optically anisotropic layer, because Okazaki only teaches a double bond-containing functional group of the liquid crystalline compound which reacts with a functional group of a polymer present in an orientation layer, and that such a reaction enables the optically anisotropic layer and the orientation layer to be chemically bonded to form a durable optical compensatory sheet, that clearly Okazaki is

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concerned with chemically bonding the liquid crystalline compound with a polymer in the orientation layer, and not with the other compound.

Applicant is respectfully reminded that Okazaki teaches that each of the discotic liquid crystal molecules has a double bond (vinyl moiety) (column 3, lines 44-46). The optical anisotropic layer comprising the discotic liquid crystal molecules and polymerizable monomer (other compound), is heated to a temperature for forming the discotic nematic phase, then (co-) polymerizing the layer via radiation of UV light (column 36, lines 55-65). The other compound can be a polymerizable monomer and polymer (column 36, lines 39-41). Okazaki gives an example of a monomer having three double bonds (ethylene glycol-modified trimethylolpropane triacrylate) added to the discotic liquid crystalline compound (column 42, lines 10-20).

Schuhmacher teaches that binders preferably are monomers (monomeric agents) which have two or more crosslinkable groups such vinyl ones (column 43, lines 55-65). Vinyl groups have double bonds. Schuhmacher gives triacrylates as an example of monomers with three crosslinkable groups (column 44, lines 5-10), and tetraacrylates as an example of monomers with four crosslinkable groups (column 44, lines 20-30). An acrylate moiety has a vinylic double bond.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used binding monomers with four or more double bonds, as taught by Schumacher, in place of the binding polymerizable monomers with three double bonds in the discotic liquid crystal layer of Okazaki, in order to obtain an anisotropic layer wherein the orientation of the discotic liquid crystal molecules is fixed by crosslinking.

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5. Applicant argues that Schuhmacher discloses binders used to bind the absorption pigments disclosed therein, completely different from the liquid crystal compounds of Okazaki.

Applicant is respectfully reminded that Okazaki is the primary reference, which teaches the mixture of polymerizable discotic liquid crystal (column 3, lines 44-46) and polymerizable monomer (column 36, lines 39-41) such as a triacrylate with three double bonds (column 42, lines 10-20). Schuhmacher is the secondary reference, which teaches a binder that comprises a triacrylate with three double bonds, or a tetraacrylate with four double bonds for crosslinking (column 44, lines 20-30), and demonstrates that it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used binding monomers with four or more double bonds, as taught by Schuhmacher, in place of the binding polymerizable monomers with three double bonds in the discotic liquid crystal layer of Okazaki, in order to obtain an anisotropic layer wherein the orientation of the discotic liquid crystal molecules is fixed by crosslinking.

For the reasons above, it is believed that the 103(a) rejections should be sustained.

6. The English translation of priority document JP '833 has not been considered at this time because prosecution has been closed, and remains closed.

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (571)272-1492. The examiner can normally be reached Monday to Friday from 10:00 AM to 6:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (571)272-1498. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Hon.

Sow-Fun Hon

01/11/04

Harold Pyon
HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

1/11/05